



Protect Our SPECIES



Endangered and Threatened Species Coloring Book

This Project has been funded by the Iowa Department of Agriculture and Land Stewardship
through a grant from the U.S. Environmental Protection Agency.

Introduction

What are endangered species?

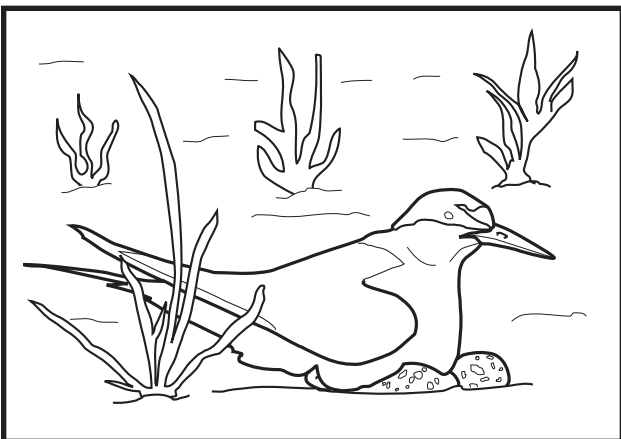


Over one hundred years ago, a bird called the passenger pigeon lived in North America. There were so many passenger pigeons that people often saw huge flocks of thousands to millions of birds. Today, none are left. What happened?

The passenger pigeon became **extinct**. All living passenger pigeons completely disappeared from the earth. They became extinct for two reasons. First, the forests where they lived were cut down to make way for farms and cities. Second, many pigeons were shot for sport because they were good to eat. At that time, there were no hunting laws to protect endangered species like there are now.



The passenger pigeon is one of the many plants and animals that once lived on our planet and have become extinct. For example, dinosaurs, mammoths, and saber-toothed tigers all became extinct long ago. More recently, the dodo bird and the sea mink also have disappeared. Extinction has been around since the beginning of life on earth. But today, extinction is happening faster than ever before.



More than 600 species are endangered or threatened in the United States today. **Endangered species** are those plants or animals that are so rare they are in danger of becoming extinct. **Threatened species** are plants or animals whose numbers are very low or decreasing rapidly. Threatened species are not endangered yet, but are likely to become endangered in the future.

How does extinction happen?

Plants and animals can disappear because of changes to the earth that are caused by either nature or by the actions of people. Sometimes a natural event, like a volcano erupting, can kill an entire species. Other times, extinction will happen slowly as nature changes our world. For example, after the Ice Ages, when the great glaciers melted and the earth became warmer, many species died because they could not live in a warmer climate. Newer species that could survive a warmer environment took their places.

People can also cause the extinction of plants and animals. The main reason that many species are endangered or threatened is because people have changed the homes or habitats upon which these species depend. A habitat includes not only the other plants and animals in an area, but all of the things needed for the species' survival — from sunlight and wind to food and shelter. The United States has many habitats, from ocean beaches to mountaintops. Every species requires a certain habitat in order to live. A cactus, for example, needs the sunny, dry desert in order to grow. A polar bear, on the other hand, would not live in a desert, because it could not find enough food and water.

Pollution can also affect wildlife and contribute to extinction. The Nashville crayfish is endangered mainly because the creek where it lives has been polluted by people living nearby. Pesticides and other chemicals can poison plants and animals if they are not used correctly. The bald eagle is one bird that was harmed by pesticides. In the past, a pesticide called DDT was used by many farmers. Rains washed the pesticide into the lakes and streams where it poisoned fish. After eating the poisoned fish, the eagles would lay eggs with very thin shells. These eggs were usually crushed before they could hatch. Today, people are not allowed to use DDT, and the bald eagle, although still endangered, has slowly begun to increase in number.

People can also endanger plants and animals by moving, or introducing, new species into areas where they do not naturally live. Some of these species do so well in their new habitat that they endanger those species already living there, called the native species. For example, when some fish are introduced into a lake or stream, they may prey upon, or eat the food of the native fish. The native species may then have to find a new source of food or a new home, or face becoming endangered or extinct. A recent pest that has come to Iowa is the Zebra Mussel. It is a small clam animal that came to the Great Lakes of North America in ballast water of ships that came from eastern Europe. The Zebra Mussel is now in the Mississippi River and is a threat to our native species.

Another way that people harm plants and animals is by taking them from the wild. Some people might catch an insect like the Mission Blue Butterfly for a butterfly collection. Others might capture a wild animal for a pet, or pick a flower because it's pretty. In addition, some people illegally hunt animals for food, skins, or fur. In the past, many American crocodiles were killed so that their skins could be made into shoes and other clothing. Now the American crocodile is an endangered species.

Why protect endangered and threatened species?

Can you imagine walking into the woods without hearing birds singing in the trees, or picture what a field would be like without wildflowers blooming in the grasses? Our plants and wildlife make the world a more interesting and beautiful place. More importantly, all living species, including people, depend on other species for survival. For example, if a fish such as the pallid sturgeon becomes extinct, all of the species that rely on it for food will also suffer and may become threatened or endangered.

Iowa Endangered Species

Since Iowa became a state in 1846, its landscape has changed greatly. The prairies that helped develop the highly productive soils have been reduced by more than 99 percent. Approximately 95 percent of the state's prairie pothole wetlands have been drained and nearly 75 percent of Iowa's original forests and savannas are gone. While many of these changes have been good for people, it has resulted in the loss or degradation of suitable habitat for many plant and animal species. It is important to protect the remaining areas that provide habitat for our most sensitive plants and animals. Concerned efforts by people have already resulted in having Bald Eagles return to nest in Iowa.

This booklet provides information about federally listed endangered and threatened plants and animals presently existing in Iowa. The picture plates also have a small picture of the upper mid-western states in which the species have been found to occur. If we want these flora and fauna to remain in Iowa for future generations, we must maintain the existing habitat remnants for these plant and animal species.

Why should we be concerned about these plants and animals?

Each plant and animal species is unique. Some may provide solutions to existing biological problems or problems that may arise in the future. Others may indicate adverse changes in the environment before they affect people, thus giving an early warning so that corrections can be made. Plants are important for medicines, food, and plant fiber. The genetic diversity of these plants may provide plant breeders with the means to help crops cope with disease, insect pests, and drought.

Individual species of plants and animals also contribute to the maintenance of other species within a community. A species may appear unimportant, but may result in the loss of one or more species that are very important to us.

In 1973, The Endangered Species Act, passed by the U.S. Congress, provides for the protection of plants and animals that are endangered or threatened with extinction. Federal agencies are required to ensure that any actions they authorize, such as the registration of pesticides by the U.S. Environmental Protection Agency (US-EPA), do not harm endangered or threatened species or their habitat.

It should be noted that this publication covers only federally listed plant and animal species. There is also a state list of endangered species. All federally listed species are included in the state endangered species list. The state list also includes plants and animals which have declined in Iowa but may be doing well in other states.

Definitions

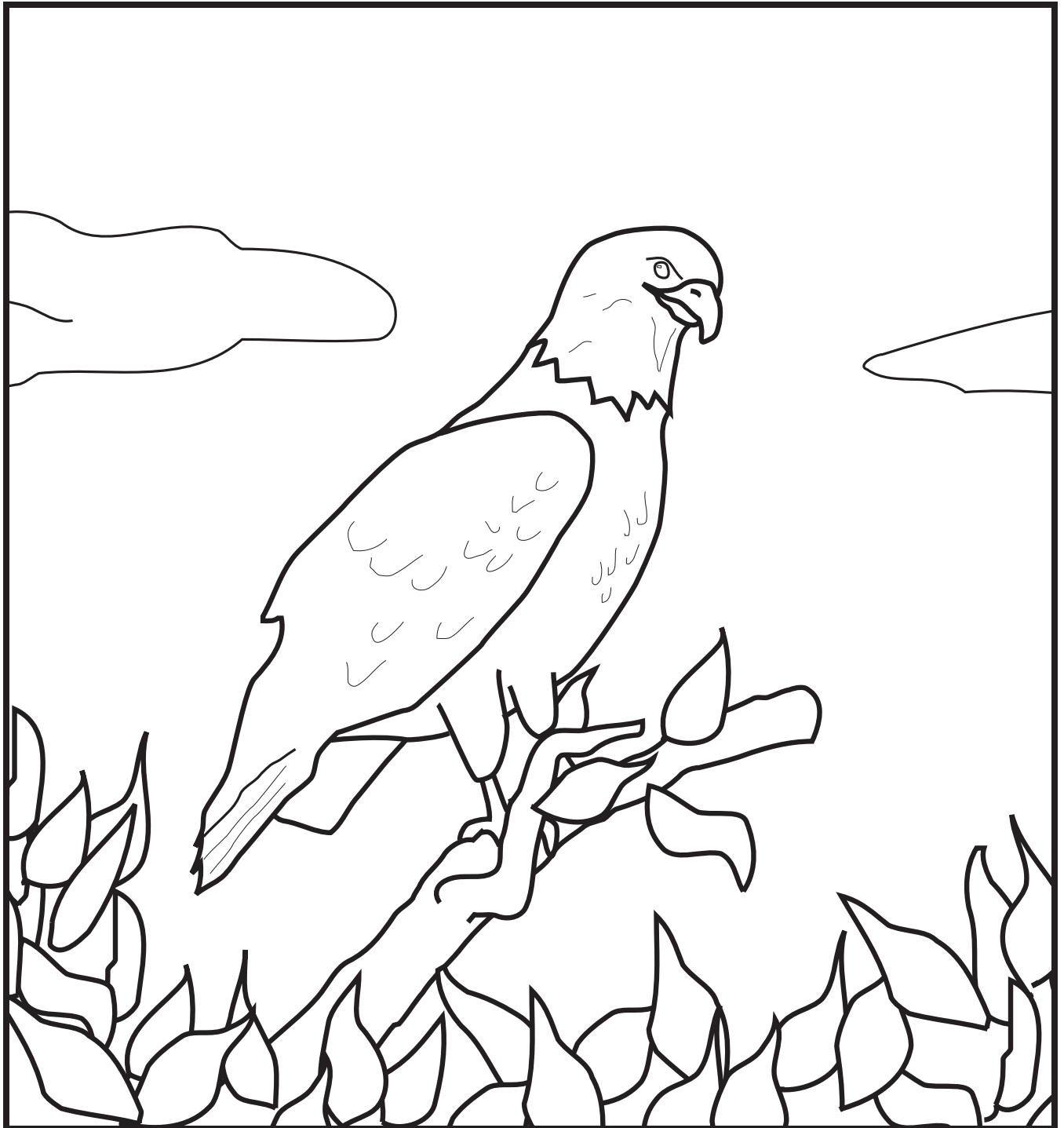
The term "endangered species" means any species in danger of extinction throughout all or a significant portion of its range.

The term "threatened species" means any species that is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range.



Bald Eagle

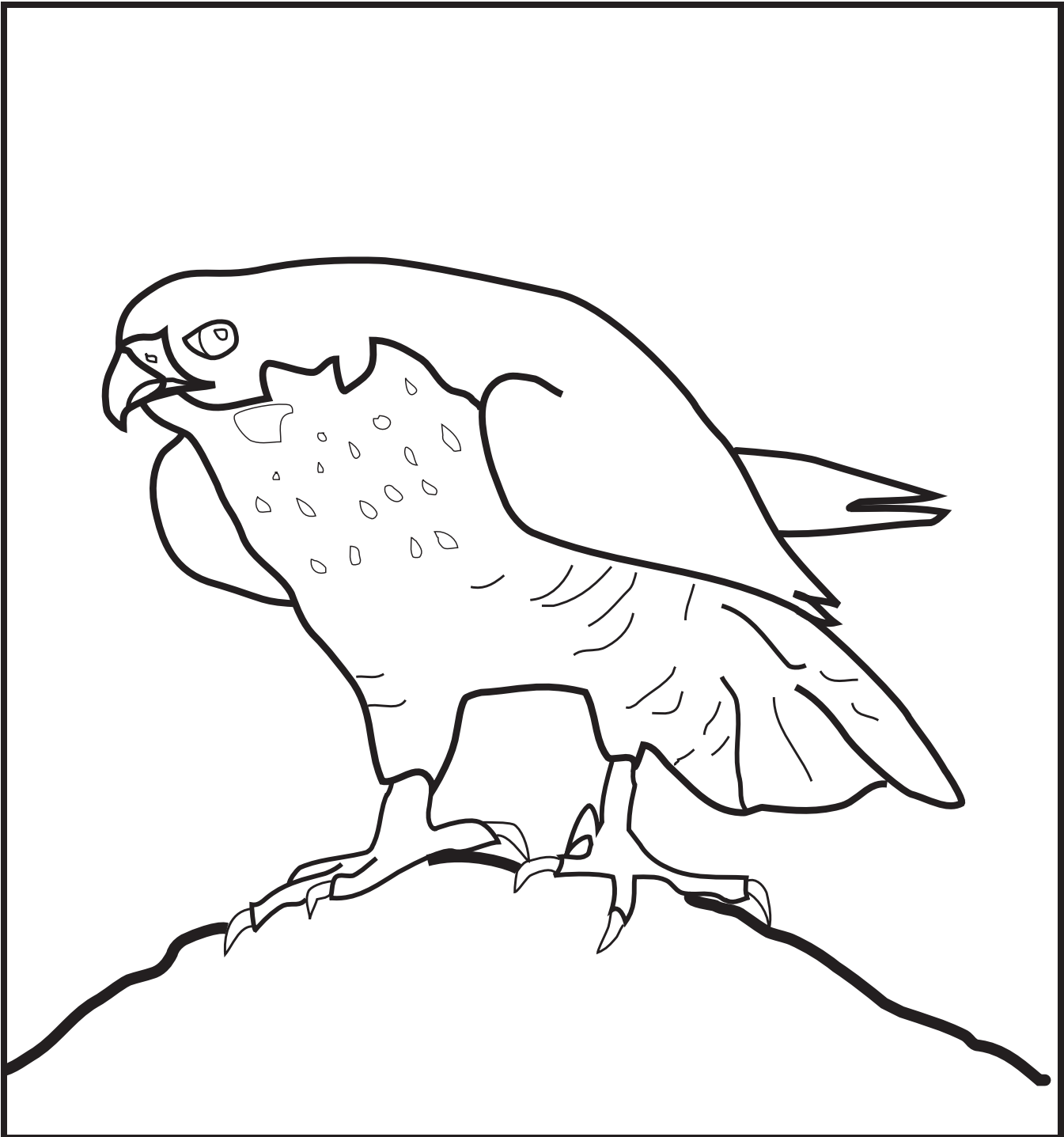
Haliaeetus leucocephalus



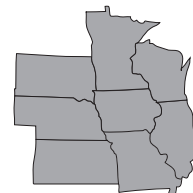
Our national symbol, the bald eagle, is a large bird (31 to 37 inches in length) with an even larger wingspan (six to seven and one-half feet). Adult birds have dark brown bodies that contrast sharply with their white head and tailfeathers. Adult birds have yellow eyes and beaks.

Peregrine Falcon

Falco peregrinus

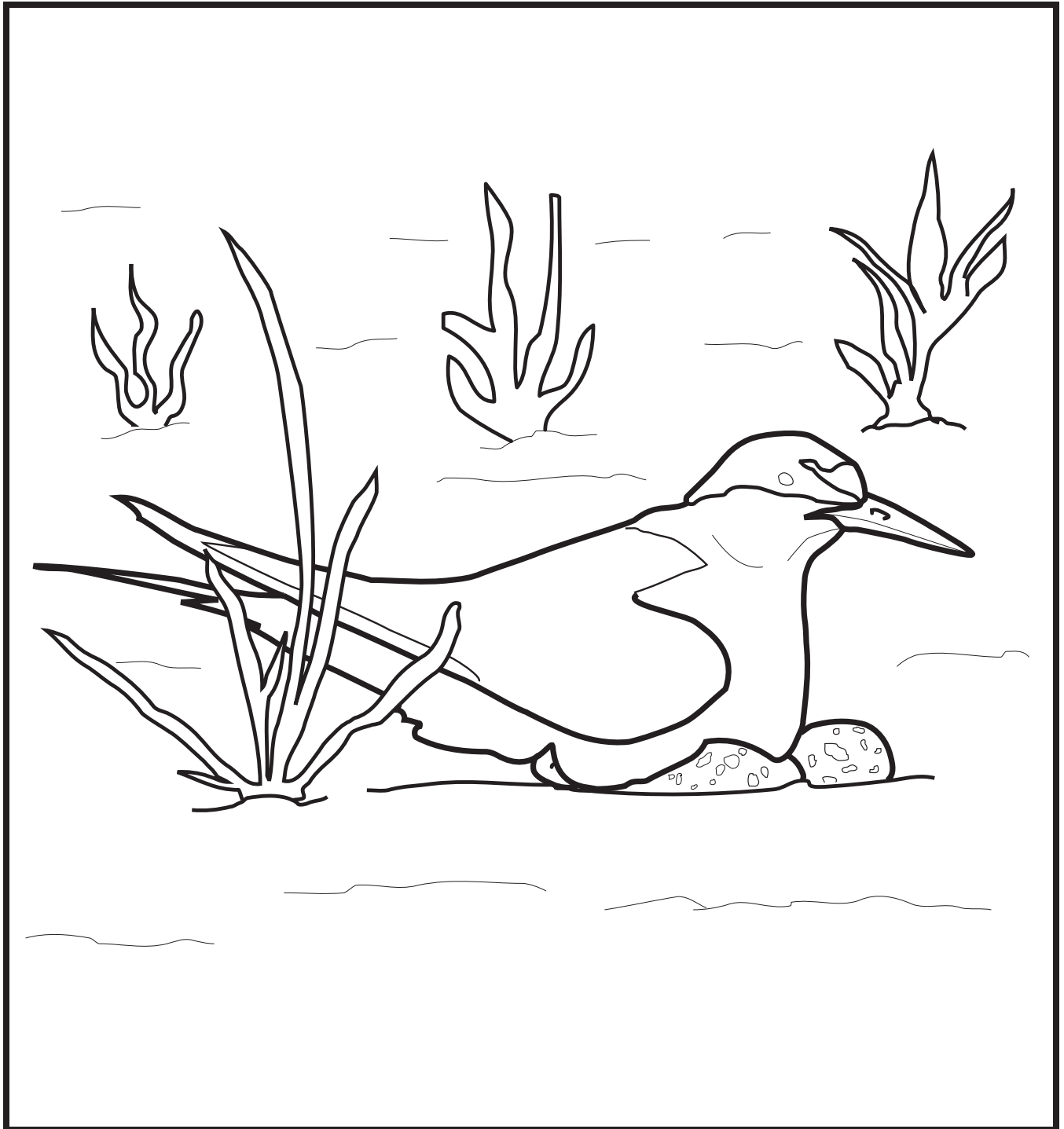


The peregrine falcon has a dark head, which appears hooded. The female is larger than the male. Adult falcons have slate blue backs and white- to buff-colored throats. The belly is white with black bars. The peregrine falcon eats pigeons, waterfowl and songbirds. When hunting, peregrine falcons perform extremely fast dives called stoops. These stoops can be as fast as 200 mph.



Interior Least Tern

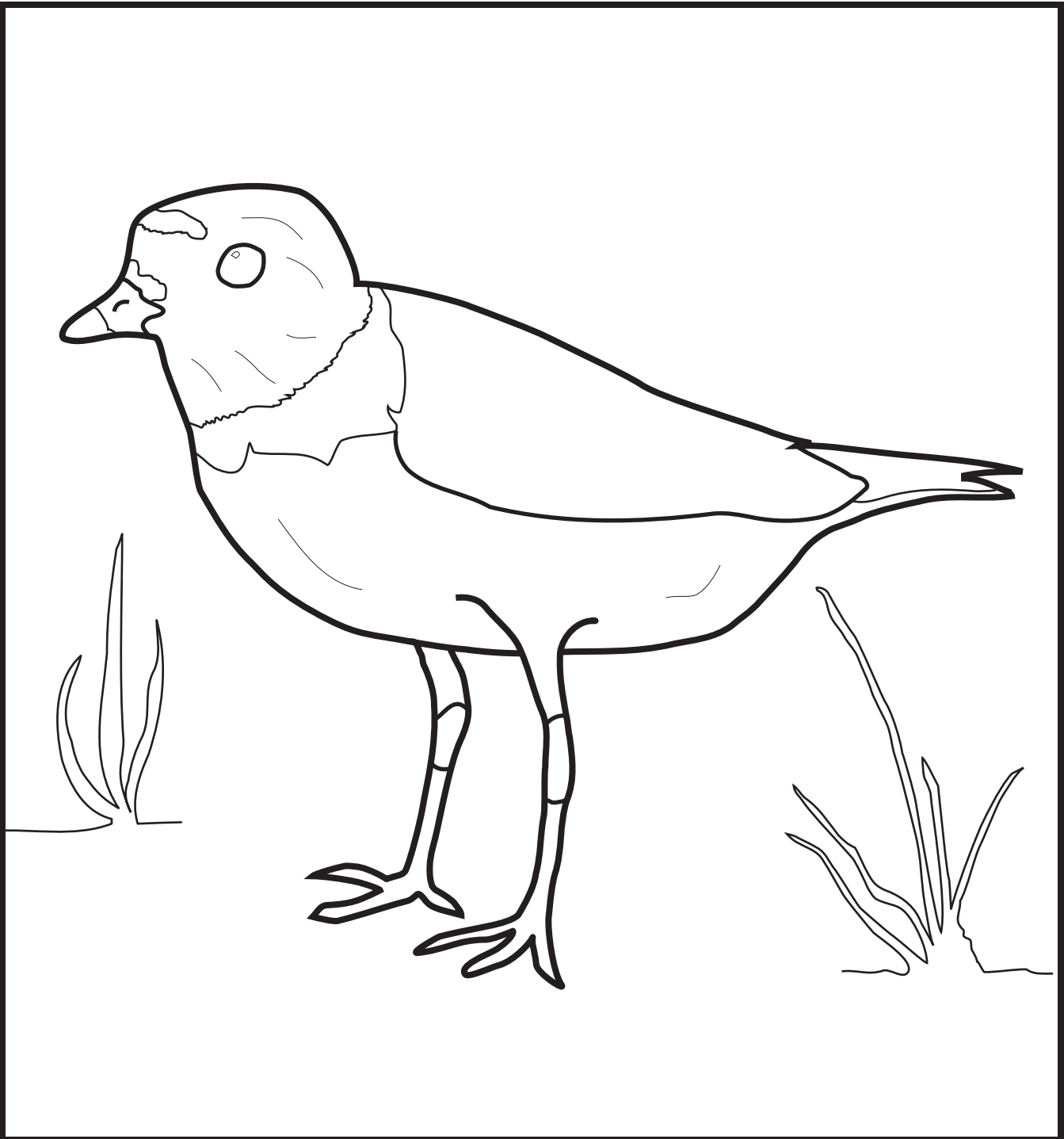
Sterna antillarum



The interior least tern is a small bird — eight and one-half to nine and one-half inches when full grown — with a black cap and a black line through the eye. They have a deeply forked tail and white outer tailfeathers. During the winter, adults have a blurred head pattern with mixed black-and-white feathers.

Piping Plover

Charadrius melodus

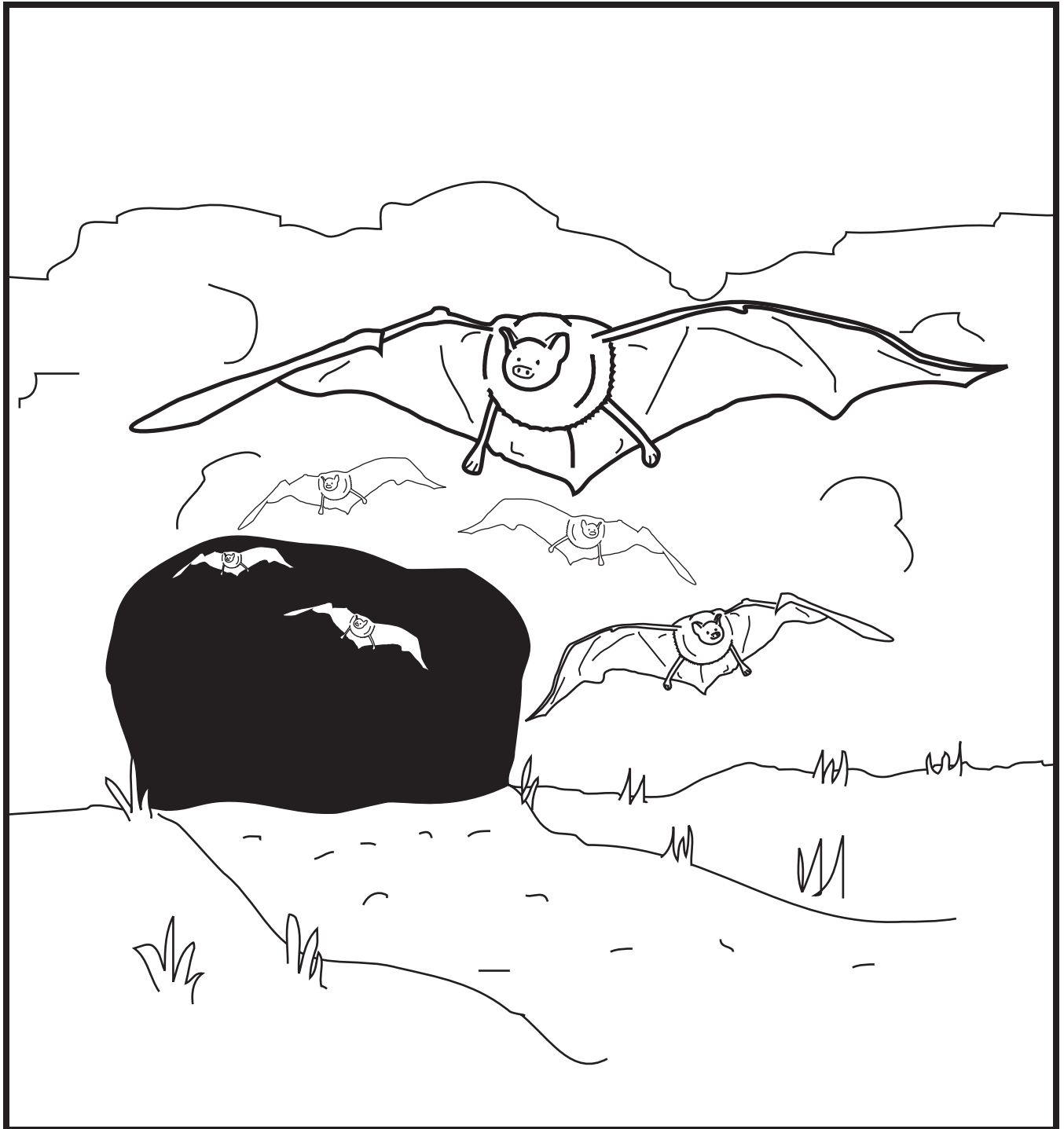


The piping plover is a small pale-colored shorebird — six to seven inches in length — with a narrow black breastband which is often incomplete. During the breeding season, adults have orange legs and a black bar across the forehead. In the Midwest, piping plovers feed on insects, crustaceans and mollusks.



Indiana Bat

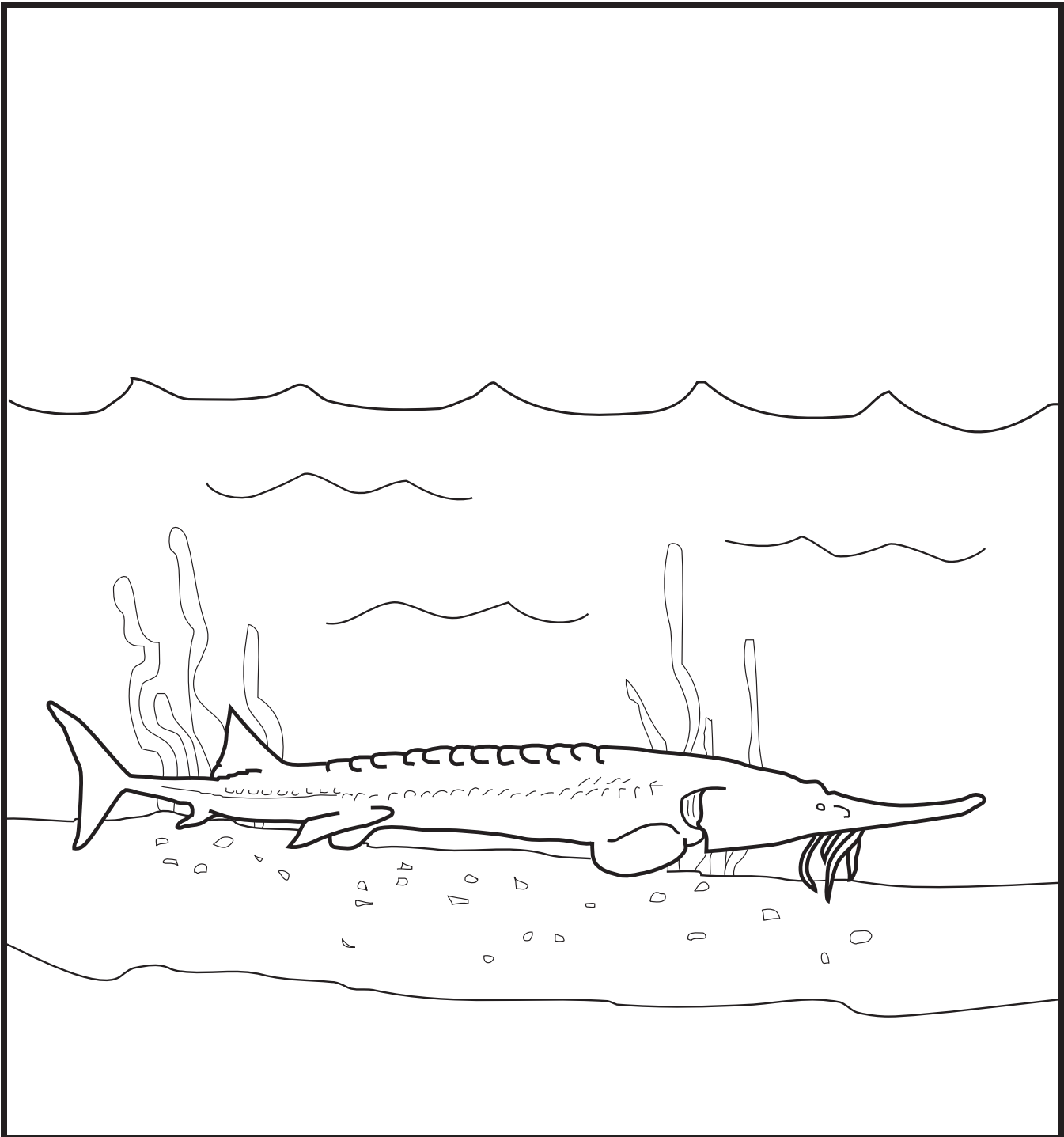
Myotis sodalis



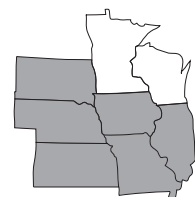
The Indiana bat is a small, dark gray or grayish brown bat with a wingspan of nine and one-half inches. It is easily confused with the little brown bat. The Indiana bat has a spur on the ankle joint and toe hairs. They usually hibernate in caves or abandoned mines in large, dense clusters of up to several thousand individuals.

Pallid Sturgeon

Scaphirhynchus albus

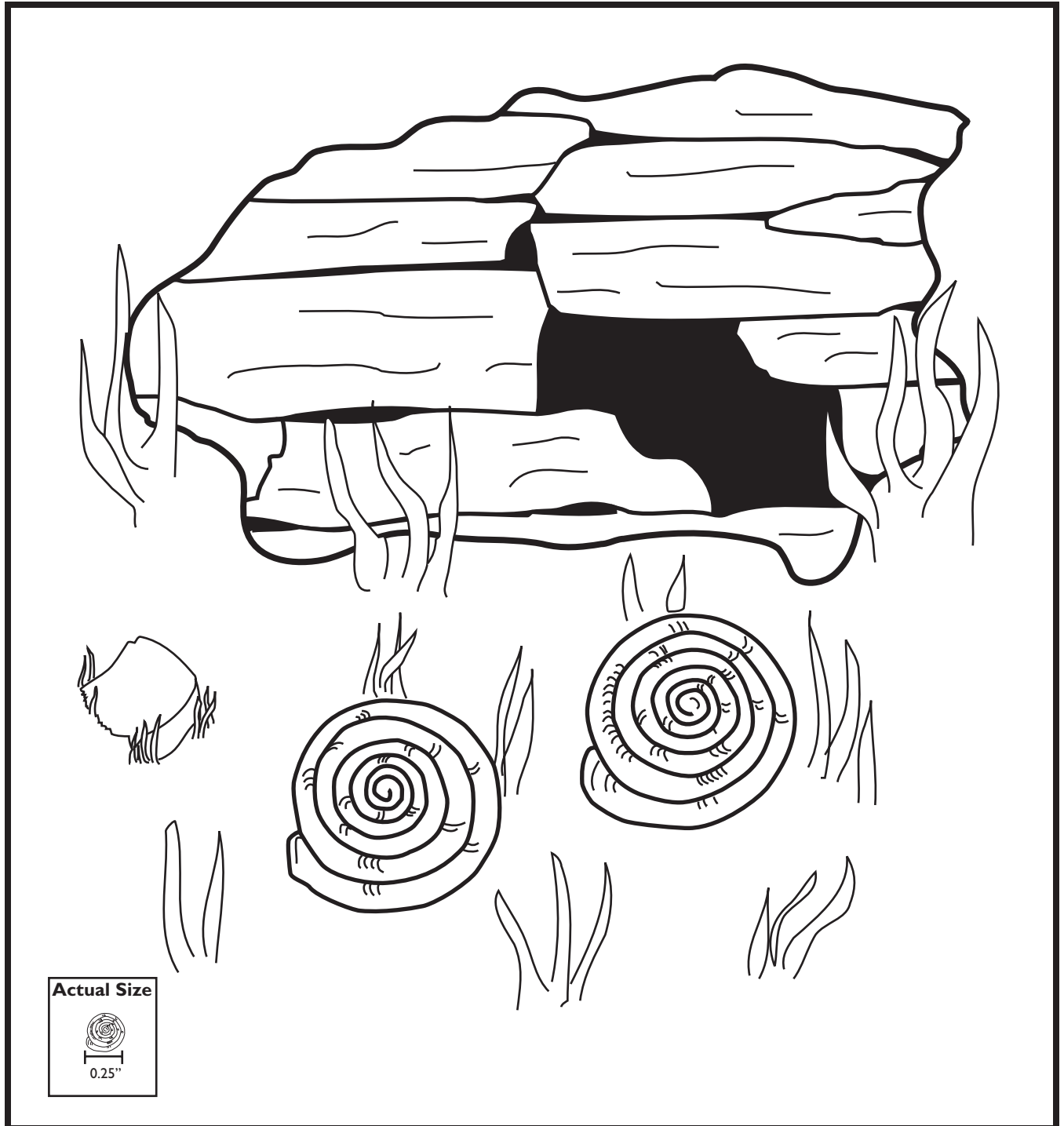


The pallid sturgeon is one of the largest fish species found in the Missouri and lower Mississippi rivers. It is light gray in color and can weigh up to 85 pounds. The pallid sturgeon has a flattened snout. It likes to stay in the bottom of streams where the current is strong.



Iowa Pleistocene Land Snail

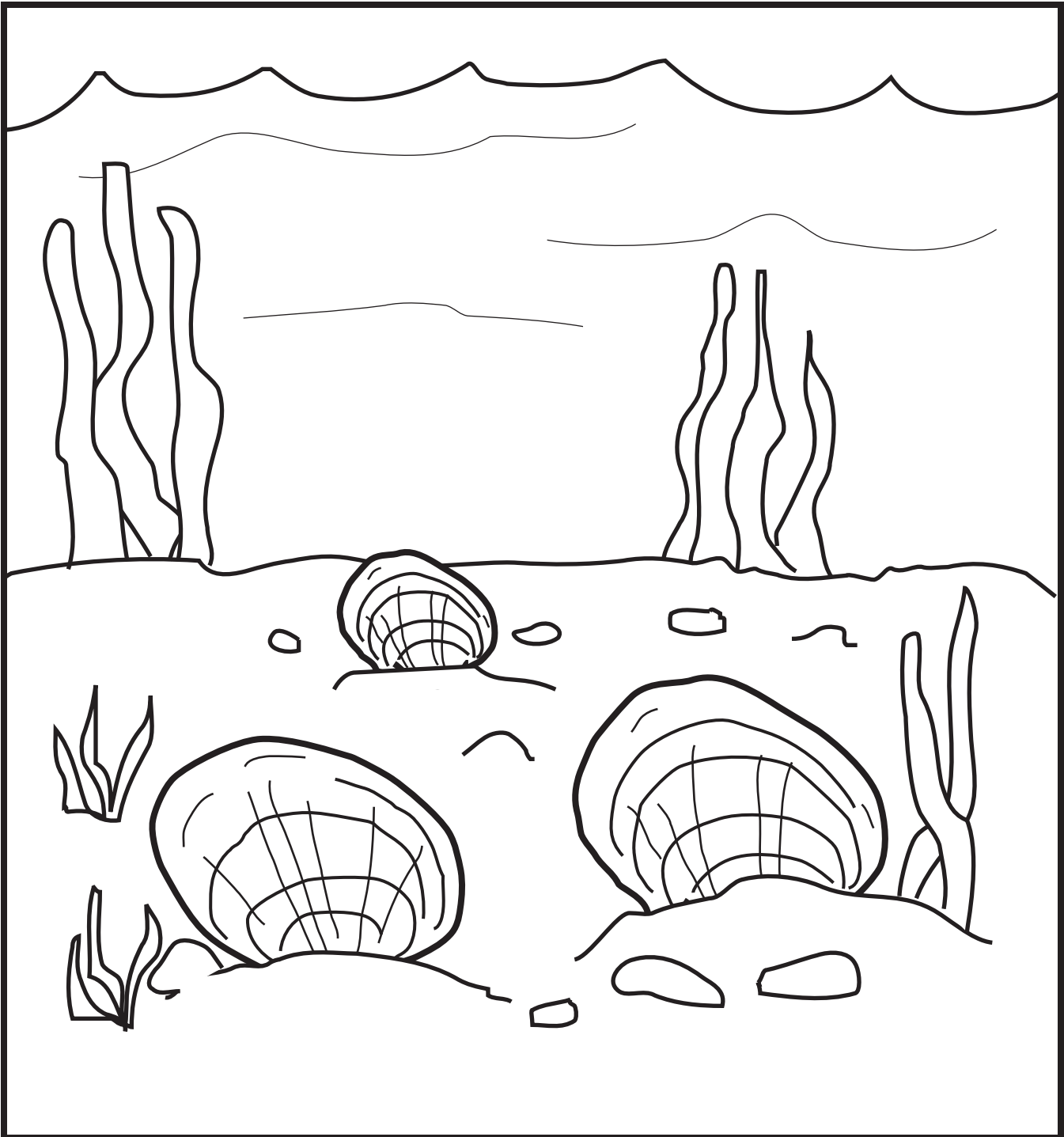
Discus macclintocki



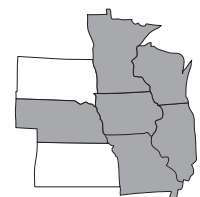
This snail is only about one-fourth of an inch in diameter as an adult. Its shell is tightly coiled and almost dome-shaped. The shell is usually brown or greenish white. There are about 30 known sites for this species in Iowa.

Higgins' Eye Pearly Mussel

Lampsilis higginsi

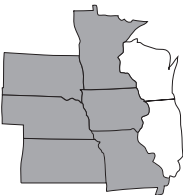
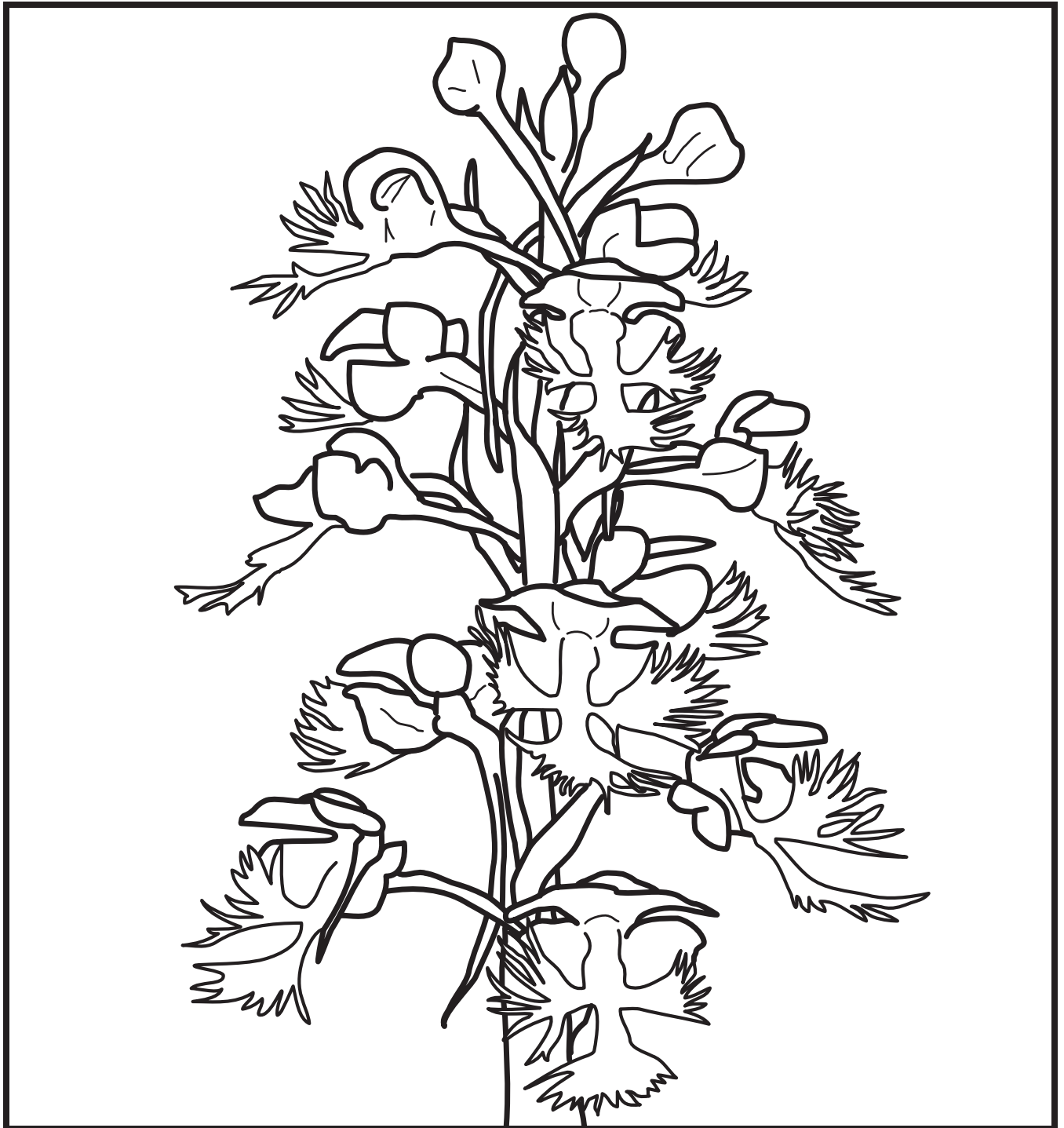


This freshwater mussel has a heavy yellow or brown shell often with faint to quite distinct green rays. The shell is oval or elliptical in shape with a difference between males and females. The male shell is nearly oval, while the female shell has a more irregular shape. This mussel prefers to live in large rivers with deep water.



Western Prairie Fringed Orchid

Platanthera praeclara



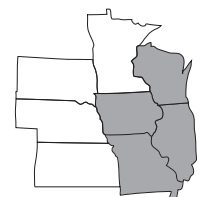
The western prairie fringed orchid can have up to 25 white showy flowers. It may grow to nearly four feet tall, but is generally shorter. In Iowa, it blooms from early June to late July. The population of the western prairie orchid is in danger for the short term.

Eastern Prairie Fringed Orchid

Platanthera leucophaea

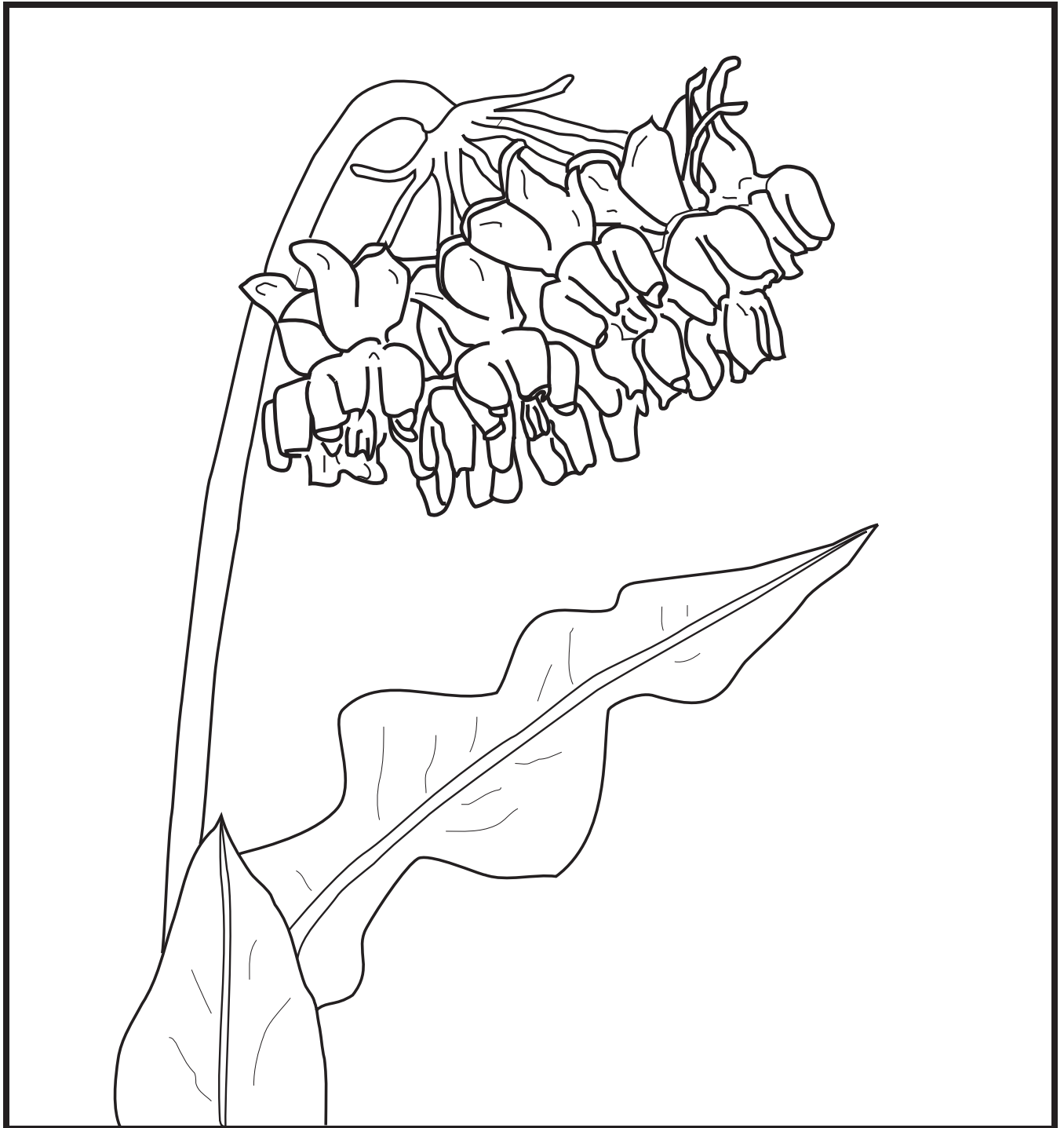


The eastern prairie fringed orchid has smaller flowers than the western prairie fringed orchid. There are few other small differences between these two species, which, until recently, were considered a single species.



Mead's Milkweed

Asclepias meadii



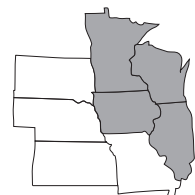
Mead's milkweed is an inconspicuous member of the milkweed family. Its stems, leaves and flowers are green. The plants are normally about 20 inches tall, but can grow to nearly 40 inches. The plants have up to six pairs of two- to three-inch long, teardrop — shaped leaves attached directly to the stem. It flowers in late May to late June. The milkweed's flowers are fragrant. Bumble bees and digger bees are attracted to its fragrance and pollinate the milkweed.

Prairie Bush Clover

Lespedeza leptostachya

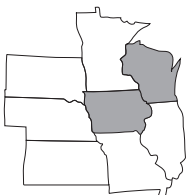


The prairie bush clover can reach a height of 39 inches. Its pale pink or cream-colored flowers bloom from mid-July to early September. The plant often appears grayish or silver in color. The prairie bush clover can be found on native prairies areas and pastures that have retained many of the original prairie species. Currently, it can be found in 11 Iowa counties.



Northern Wild Monkshood

Aconitum noveboracense



The northern wild monkshood grows from erect to climbing and can be up to 40 inches tall. The flowers are blue and, occasionally, white. It is typically found on shaded cliffs and talus slopes. In Iowa, it blooms between June and September. Several species of bumblebees pollinate this flower in Iowa.



This publication was coordinated by *IDEA - Information Development ~ Expanding Awareness*, a collaborative effort initiated by the North Central Cooperative Extension Services to increase the efficiency and effectiveness of developing, producing and/or marketing educational products nationwide.

Through *IDEA*, the Cooperative Extension System's mission is to encourage and expedite partnership among interested educators in the development and promotion of educational products. Its publications are subject to peer review and prepared as a part of cooperative extension activities in cooperation with the Cooperative State Research, Education and Extension Services (CSREES) - U.S. Department of Agriculture, Washington, D.C.

For additional copies contact ...

Pesticide Bureau
Laboratory Division
Iowa Department of Agriculture and Land Stewardship
Wallace State Office Building
Des Moines, IA 50319
(515) 281-8506

Extension Distribution Center
Iowa State University
119 Printing and Publications
Ames, IA 50011-3171
Phone: (515) 294-6606
FAX: (515) 294-2945
Email: PUBDIST@EXNET.IASTATE.EDU

Appreciation is extended to Iowa State University Extension and the Iowa Department of Natural Resources for assistance with text and images for this publication. Special appreciation is extended to the U.S. Environmental Protection Agency for the use of some text from the Save Our Species Endangered Species Coloring Book, which was published in September 1991.

To view sample pages of this publication on the web, visit the following website:
<http://idea.exnet.iastate.edu/idea/marketplace/coloringbook/>

